entropy

an Open Access Journal by MDPI

IMPACT FACTOR 2.419

Physics of Ionic Conduction in Narrow Biological and Artificial Channels

Guest Editors:

Prof. Peter V E McClintock
Department of Physics, Lancaster University, Lancaster LA1 4YB, UK

p.v.e.mcclintock@lancaster.ac.uk

Dr. Dmitry Luchinsky
Department of Physics, Lancaster University, Lancaster LA1 4YB, UK

d.luchinsky@lancaster.ac.uk

Deadline for manuscript submissions:
31 May 2020

Message from the Guest Editors

Biological ion channels are essential to life in all its forms. It is now appreciated that an understanding of selective conduction requires physics, and that the physics of biological ion channels has a great deal in common with that of artificial nanopores. Large-scale molecular dynamics simulations are yielding atomistic and statistical insights into many channel properties as a function of structure. However, the ability to predict the function of a channel from its structure, e.g., following a point mutation of a biological channel or the functionalization of a nanopore, remains elusive. Nonetheless, these recent advances have brought us tantalisingly close to a fundamental theory of ionic permeation, based on the statistical physics of ions within the channel.

The Special Issue aims to bring together original high-quality papers on ionic permeation through narrow water-filled channels, both biological and artificial. It will include papers on the statistical physics of the process, on molecular dynamics and Brownian dynamics simulations, and on relevant experiments.

entropy

an Open Access Journal by MDPI

IMPACT FACTOR 2.419

Editor-in-Chief

Prof. Dr. Kevin H. Knuth
Department of Physics, University at Albany, 1400 Washington Avenue, Albany, NY 12222, USA

Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High visibility: indexed by the Science Citation Index Expanded (Web of Science), MathSciNet (AMS), Inspec (IET), Scopus and other databases.
Rapid publication: manuscripts are peer-reviewed and a first decision provided to authors approximately 19.9 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2019).

Contact Us

Entropy
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
Fax: +41 61 302 89 18
www.mdpi.com

mdpi.com/journal/entropy
entropy@mdpi.com
@Entropy_MDPI